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THE EFFECT OF INVOLVEMENT ON COLLEGIATE BINGE DRINKING:  
AN EXAMINATION OF COMPETING SOCIAL THEORIES

BY

LAUREN RINALDI MAGRATH  
Bachelor of Science, Syracuse University, 1999

THESIS

Submitted to the University of New Hampshire  
in Partial Fulfillment of  
the Requirements for the Degree of

Master of Arts

in

Liberal Studies

May, 2007

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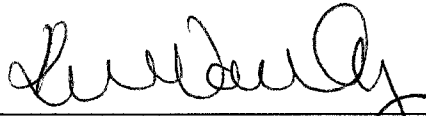
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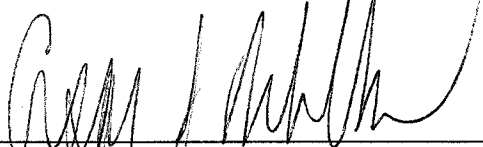
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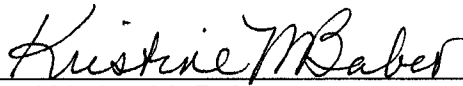
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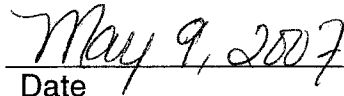
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Date

## DEDICATION

This thesis is lovingly dedicated to Princey,  
who kept me company through so much of my lonely reading.

And to Scott, for always knowing when I desperately needed  
a hug, a dinner, or a kick in the butt.

I love you.

## ACKNOWLEDGEMENTS

This thesis and my degree are certainly not the work of one individual. I would like to thank my committee members, Dr. Cesar Rebellon and Dr. Kristine Baber for the time they invested towards making this the best work I could put forth. Their thorough evaluations and honest feedback made this a better paper than it could have been without their insight.

I would also like to thank the entire University of New Hampshire Sociology Department for adopting a student without a department to call her own. In the Sociology Department I always had a place to write, students with whom I could “talk shop”, and professors who engaged and challenged me. I am confident my educational experience at UNH was greatly enhanced by the welcoming academic atmosphere of the department and for that I am grateful.

I am especially thankful for the knowledge and experience of my chairperson, Dr. Karen Van Gundy. Karen’s enthusiasm for her work and her students both inspired and motivated me. This thesis was greatly enhanced by her topical knowledge, and even more critically, her statistical expertise. Most exceptionally, though, I am thankful for Karen’s time and interest in me as a student. It is because of her that I was able to find a home in the Sociology Department, that I found my thesis topic, and that I believe my higher education will not stop here.

My mom and dad must also be recognized, lauded and thanked for all they have given me. My parents have supported my education for as long as I

can remember, and encouraged me to push, what I believed to be, my academic limits at all times. They have always given me the confidence to try the more challenging courses, pursue my interests, and trust they knew my capabilities better than I did. I believe I owe much of my academic self-esteem to their constant assurances that I could do it.

Finally, I thank Scott. He was my chauffeur while I read articles on long car rides; he was my launderer when I just didn't have the time for such things; he was my devil's advocate when I needed to think through ideas. Throughout my classes, thesis, wedding planning, job changes, and long work hours, he always made sure I stopped to have fun along the way. He kept me grounded and happy at times when I wouldn't have believed either to be possible. I love you, Babe.

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## ABSTRACT

### THE EFFECT OF INVOLVEMENT ON COLLEGIATE BINGE DRINKING: AN EXAMINATION OF COMPETING SOCIAL THEORIES

by

Lauren Rinaldi Magrath

University of New Hampshire, May 2007

The perils of collegiate binge drinking are well documented in popular media, frequently in light of athletic or Greek participation. This study was designed to better understand relationships between an expanded list of involvements and the frequency of bingeing by applying competing theories. Social bond theory predicts all conventional involvements will serve to prevent deviant behavior. In contrast, subcultural theory suggests some involvements will serve to support deviance. Using the College Alcohol Study and OLS regression, this study examined the relationship between involvements and bingeing, and if the processes operate by gender. The study found some results in alignment with both theories and further found some relationships to be conditioned by gender. Each of the associations found to be conditioned by gender, including Greek membership, athletic participation, and studying were stronger for males. The findings support niche-targeted approaches to both prevention and harm-reduction programming and education about binge drinking.

## INTRODUCTION

Idle hands are the devil's playground, or so the proverb goes. As my daily work for a college illuminates, one segment of the population with vast potential for idle hands is college students. For full-time students, mandatory in-class time consumes a mere ten to twenty hours per week, leaving the remaining hours of their days and weeks available for studying, sports, naps, student organizations, work, video games, and innumerable other activities students find to fill their time and idle hands. While most students eventually leave college and go on to fill the ranks of professionals and productive citizens, their behavior while attending college is often a target for concern. A recent popular book, *Binge*, is just one of many examples of adults decrying the ever-worsening culture of college drinking (Seaman 2005).

The act of heavy episodic, or binge, drinking in college has been associated with such detrimental effects as acute health problems, unsafe sex, aggressive behavior, property damage, and academic difficulties (Midanik, Tam, Greenfield and Caetano 1996; Carey and Correia 1995; Wechsler, Dowdall, Davenport and Castillo 1995). Given such consequences, the US Department of Health and Human Services has issued the reduction of binge drinking by college students as one of the major goals of the *Healthy People 2010* program as the study revealed that nearly two out of five (39%) college students binge drink (2000). For the purposes of this study, and in line with many current researchers of the subject (Leppel 2006; Meilman, Leichliter and Presley 1999; Alva 1998;

Cashin, Presley and Meilman 1996; Engs, Diebold and Hanson 1996; Haines and Spear 1996), binge drinking is defined as consuming at least five drinks in one sitting.

One of the many measures taken by college administrations in an effort to curtail the amount of drinking is the ongoing development of a growing list of extracurricular offerings. While much has been written about the psychosocial benefits of formal extracurricular activities (Eccles et al. 2003; Astin 1999; Hunt and Rentz 1994; Marsh 1992; Landers and Landers 1978), little has been evaluated regarding a broader category of conventional involvements, including athletics, volunteering, studying, Greek membership, work, and student-organization participation, as they pertain to alcohol use or abuse. Do such involvements help to prevent binge drinking?

Applying competing theories, social bond theory and subcultural theory, this study seeks to answer that question as it relates to most forms of conventional collegiate involvement. Hirschi's (1969) social bond theory indicates that bingeing should be reduced through increased conventional involvements, as it includes involvement as one of four critical elements for the prevention of deviance. In contrast, subcultural theory implies that some types of involvement, specifically athletic participation and Greek membership, will serve to support or encourage deviant behaviors including binge drinking (Fine and Kleinman 1979; Wolfgang and Ferracuti 1967; Matza and Sykes 1961). It is hypothesized that involvements characterized by a membership process, exclusive selection, and a group orientation will be more likely to support deviant

behaviors, evaluated here through binge drinking. Each theory will be further described in this thesis as it applies to developing the relevant hypotheses.

For the purposes of this study, involvement has been operationalized as time spent on activities, condoned or encouraged by college administrators, including wage work, participation in student organizations, volunteering, athletics, Greek membership, and studying. Henry Wechsler's College Alcohol Study (CAS) (2001) will provide the data for the study to measure the extent to which each type of involvement is associated with drinking behavior among college students. The study questionnaire was mailed to college students currently enrolled in four-year institutions and designed to understand the drinking activities, resultant behaviors, and alcohol policies as they are experienced by students.

In the case that the involvement element of Hirschi's social bond theory is upheld and involvements do aid in the prevention of binge drinking, it would be beneficial, from the viewpoint of *Healthy People 2010* and college administrators interested in reducing binge drinking, for schools to investigate how to involve a greater percentage of students in such activities. On the other hand, if some involvements support drinking, as subcultural theory would suggest, administrators would be advised to weigh the perceived benefits of such involvements against the well-documented and studied costs of binge drinking. They might consider approaches targeting programs to associated students, advisors, coaches, resident assistants, hall directors, and the overall structure of the organizations themselves. Additionally, if the processes do operate

differently for men and women, administrators should consider research investigating the most influential agents of change and influence within each gender when considering how to reconcile the problem with the college's expectations.



## CHAPTER I

### REVIEW OF THE LITERATURE

In this thesis, I examine what effect, if any, various types of involvement have on binge drinking in college students. In an effort to explain the hypothesized associations, I apply competing theories, social bond theory and subcultural theory, which posit potentially divergent effects of involvement on deviance, operationalized within as binge drinking. In addition, I explore if these processes function similarly for men and women.

In order to more thoroughly understand the variables relevant to this thesis, I first examine how they have been studied in the past, what is conventionally understood, and how they have been shown to relate to each other in previous research. This will include a review of studies regarding general college alcohol consumption and the causes for concern regarding binge drinking. The primary theories to be used in the study, social bond and subcultural theory, also will be described. The review seeks to fully illuminate how they are conceived and how they have been used in previous research to understand causes of, and preventions for, binge drinking. Finally, a review of involvement follows, as the concept pertains to both college students and the relevant theories. It will explain how and why involvements have been operationalized for the purpose of this thesis.

## College Alcohol Consumption

Seen by some as a rite of passage, the consumption of alcohol while attending college is a well-documented occurrence (Hingston, Ralph, Heeren, Winter and Wechsler 2005; Wechsler and Wuethrich 2002; Durkin, Wolfe and Clark 1999; Haines and Spear 1996; Igra and Moos 1979). The US Department of Health and Human Services has identified the reduction of binge drinking by college students as one of the major health goals of the *Healthy People 2010* program, as the report revealed that nearly two out of five, 39%, of college students binge drink (2000). Binge drinking, as defined by *Healthy People 2010*, and much of the related binge drinking research over the past decade, is five drinks in a row in one sitting (Leppel 2006; Meilman et al. 1999; Alva 1998; Cashin et al. 1996; Engs et al. 1996; Haines and Spear 1996).

A revised operational definition of binge drinking was recently developed by the National Institute of Alcohol Abuse and Alcoholism (2004) which adds the measure of the duration of time in which the alcohol was consumed and includes bingeing behaviors over the past year. An initial study reviewing the new definition as it compared with data from one standard definition (five drinks in a sitting for males and four for females) found including the measures of drinking duration and past behaviors gave a more comprehensive understanding of the alcohol-related behaviors of the college students assessed (Cranford, McCabe, and Boyd 2006). While academic discourse on the validity of any measure is noticeably absent, it is not part of this investigation. However, given that the data for this study were collected prior to the development of the new measures for

binge drinking, the necessary questions regarding past year behaviors were not included and so the standard measure will be used.

The desired reduction of binge drinking is grounded in the literature of damage caused to the individual and others while under the influence of alcohol. The negative side effects include social, personal, physical and academic ramifications. First, considering the effects of binge drinking on oneself, one study found that for students beyond the freshman year, the addition of one drink above the average amount consumed, not including abstainers, was found to increase their likelihood of missing a class by 8-9% and of falling behind in classes by 5% (Powell, Williams and Wechsler 2004). Perkins (2002) found that 10-20% of students reported some type of physically self-injurious behavior over the past year while binge drinking. A 2005 study by Hingston et al. found a 6% increase from 1998 to 2001 in alcohol-related deaths among college students. Another study examining the same data looked at women who were raped and found that while 4.7% of college women reported being raped, 72% of those raped also reported they were intoxicated at the time of the incident (Mohler-Kuo et al. 2004). Wechsler and Isaac (1992) found that students engaging in heavy episodic drinking were three times more likely than other drinkers to engage in unplanned sexual activity. Additionally, the 1997 CAS showed that 9% of students did not use protection during sex, which the students attributed to their own intoxication (Wechsler et al. 1998). Finally, 5-12% of students report some trouble with either police or campus authorities due to their drinking (Wechsler et al. 1998; Engs and Hanson 1994).

Overall, trouble with the authorities included violations of liquor laws, public intoxication, fights, and driving under the influence of alcohol. Engs et al. (1996) found that 17% of men and 10% of women who were classified as light to moderate drinkers drove drunk at least once in the previous year, whereas 53% of men and 46% of women classified as heavy drinkers reported having done so in the past year. Local community members and other students also are directly affected by binge drinking. Property damage and vandalism are widely reported by students and community members (Wechsler et al. 1998; Engs and Hanson 1994), and Perkins (2002) notes the limited research but notable “town/gown” strains suffered due to students’ misuse of alcohol. Additionally, 44% of students report having to care for students who consumed too much in an evening (Wechsler et al. 1995). In the same study, 13% of students reported that they had been pushed, hit, or assaulted as a result of another students’ drinking, 22% reported they had been involved in a serious quarrel, and 27% had been insulted or humiliated by another student’s drinking.

While many students experience the negative side effects of binge drinking, not all are participating in the behavior. Demographic analysis show that college binge drinkers are more likely to be male, young (younger than 24), Caucasian, and single (Strano, Cuomo, and Venable 2004; Cashin, Presley, and Meilman 1998; Wechsler et al. 1995; Engs and Hanson 1994). Furthermore, the same studies show binge drinking during the last year of high school to be a very strong predictor of college binge drinking. Accordingly, this study controls for high school binge drinking behaviors. Wechsler et al. (1995) also found that

among attitudinal items, the importance of religion was strongly predictive of bingeing. Finally, any mention of socio-economic status as related to collegiate bingeing is absent from every study reviewed by this author. As possible explanations, this could be due to concerns if students could accurately answer a "household income" question, or it may be a presumption that, given the expense of college, there would not be enough diversity of response to assess differences. Insofar as higher parental education can be indicative of higher income, a question regarding parent's level of education is used as a proxy for socioeconomic status for this thesis.

One of the goals of this study was to discern if the processes influencing involvement on college binge drinking operate similarly for men and women. In previous studies, Strano et al. (2004) found that the difference between men and women binge drinking even once and not bingeing at all in the past two weeks was significant ( $p < .004$ ), with 43% of males reporting no bingeing and 58% of females reporting no bingeing. The authors also found that being male was a significant predictor of high versus low frequency of binge drinking. In contrast, in a study of the correlates of college student binge drinking by Wechsler et al. (1995) a multiple logistic regression analysis was undertaken to provide the best statistical prediction of bingeing and found that when other variables are controlled, specifically those with the strongest correlation to bingeing (including age, race, high school bingeing, parental abstention, having five or more friends, grades, sexual activity, athletics, fraternity residence, studying, and marijuana use) the risk of being male largely disappeared. Among the demographic items

measured, only race (being white) and age (younger than 24 years old) remained important.

With so many students participating at some point in binge drinking, it is appropriate to discuss if the behavior should be perceived as deviant at all. Given that the legal drinking age is 21 in all states, any underage drinking could be qualified as deviant behavior. However, the argument has been made (Igra and Moos 1979) that “drinking fits into the mainstream of college life” (p. 402) and therefore cannot be deviant. While drinking itself may be in the mainstream, this thesis is interested in looking at the frequency of *binge* drinking. Three factors mandate that binge drinking be classified as deviant. First, given that 39% of college students do binge, as referred to in *Healthy People 2010*, the majority of college students then do not binge drink. Second, the act of binge drinking is strongly discouraged by college administrators, as they strive to offer myriad evening alternatives as well as educational programs elucidating the dangers of bingeing (Wechsler and Wuethrich 2002). Finally, for the majority of college students (those under 21) drinking itself is illegal, meaning that all of the drinking behavior deviates from broader societal expectations.

Given that such a large minority of students deviate from societal expectations by binge drinking, and considering the established dangers of such behavior, it is the goal of this study to explore binge drinking using two criminological theories of deviance as a framework for understanding this behavior. First, I review social bond theory, its definition and use of involvement, and the involvements I expect will be negatively associated with bingeing as

predicted by the theory, including wage work, volunteering, studying, and participation in student organizations. I will then review subcultural theory, its description of involvement, and why I hypothesize that involvements categorized as such, including athletics and Greek participation, will be positively associated with binge drinking.

### **Social Bond Theory**

Deviant acts have been committed in every society throughout time. Travis Hirschi's (1969) social bond theory assumes people will inherently commit deviant acts, unless some force, or more likely *forces*, act against them. The usual question regarding acts of deviance is 'why do people commit deviant acts?' Social bond theory instead tries to answer why nondeviants abstain from committing deviant acts, and one element of the theory is their involvement in conventional activities. The theory assumes that all people, given free reign, would commit deviant acts that offer some reward. Travis Hirschi (1969) formulated the social bond theory arguing that the probability of delinquency is reduced when an individual has strong ties to one or more of the four elements making up a social bond. The four identified elements leading to conformity, and therefore decreased delinquency, include attachment, commitment, belief, and involvement<sup>1</sup>.

The focal independent variable of this thesis is the social bond element involvement. Involvement refers to the amount of time and engagement one spends in conventional activities. For the purpose of this thesis, to examine if

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<sup>1</sup> For more a more detailed description of social bond theory, see Appendix A.

conventional involvements influence the frequency of bingeing during the college years, I will consider work hours, hours spent on academic work, Greek life involvement, participation in student organizations, intercollegiate athletic involvement, and volunteer activities. Hirschi does not define his use of the word “conventional” and so for this thesis it has been operationalized as all activities sanctioned, funded, encouraged, or advised by most college administrations. Given Hirschi’s (1969) rationale for the inclusion of involvement in the social bond theory, that a person may become too busy with conventional activities to find time for deviant or unconventional endeavors (p. 22), it seems the most appropriate way to study this bond element.

However, involvement has been questioned in regard to its usefulness as a preventative measure against deviance given that deviant acts can take so little time. Considering the deviant behavior at hand, binge drinking, it is apparent that the act itself can take very little time (consider popular drinking “games” where the object is to get as drunk as possible in as little time as possible). Social bond theorists have since moved further from arguing that involvement is useful because it fills free time, and instead posit that involvement is a useful means of deviance prevention because individuals actually learn to enjoy the activities in which they are involved. Therefore, on some level they make a rational choice to engage in conventional activities as alternatives to delinquent ones (Agnew and Petersen 1989). Hirschi himself broached this concept in his original work as he noted that certain activities may engross and involve students to the point where



the conventional involvements “inhibit concern with and involvement in” deviant activities (1969, p. 196).

Therefore, it is theorized that an individual with a strong bond to the society through conventional involvements is less likely to commit deviant acts. As it relates to this thesis, it should then be hypothesized that students who spend greater amounts of time in conventional involvements will have lower rates of binge drinking. Accordingly, it is hypothesized that greater hours spent in volunteering, work, student organizations, and studying will be inversely related to binge drinking. However, the data related to binge drinking and certain types of involvements, specifically athletic and Greek participation, regularly bears out that social bond theory does not hold true when applied to these particular involvements. This will be reviewed later in the thesis. To understand how and why athletic and Greek participation differ from other conventional involvements, I look to subcultural theory for an explanation.

### **Subcultural Theory**

It is an hypothesis of this thesis that two types of collegiate involvement, athletic and Greek membership, will serve to *support* binge drinking because of their identification as deviant subcultures. Before a discussion of subcultural deviance ensues, it is critical to first understand how these two groups can be characterized as subcultures<sup>2</sup>. Using Fine and Kleinman’s (1979) conditions to establish a subculture, it is apparent that all members of a sports team would identify themselves as members of that team. There is rarely any question as to

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<sup>2</sup> For a more detailed description and history of subcultural theory, see Appendix B.

who is on the roster and who is not. The same can be said for Greek membership. Invitations are offered and if they are accepted, students go through some form of pledge and initiation process, at the end of which they are either in the group or out of the group. Again, there is little room for anyone to either improperly self-identify as a member of the group or not know if they are a member of the group.

The second prerequisite required by Fine and Kleinman (1979) in order to establish the existence of a subculture is that of internal communication. It is certainly true that both athletic teams and Greek groups meet regularly within their teams or chapters. However, it is also true that both institutions have communication between their respective teams or chapters. Teams are unified by games, conferences, divisions, and the NCAA, in addition to the informal communication between friends or rivals from previous teams and schools. Greek chapters are unified by their local and national Pan-Hellenic and Intrafraternity Council (national Greek affiliations and conferences). It is also important to note that each of these groups now has the added benefit of mass media and the internet to serve as means of internal communication. So it can be established that, with college communities as the parent culture for both athletics and Greek life, they are subcultures.

Accepting that subcultures have their own norms, the groups are most often classified by those which deviate from the norms of the referent group. It is perhaps for that reason that more than one coach has lamented at some time, "When he sings in the choir, he's a business major; when he gets caught at a keg

party, he's a football player." Recently, Wooden and Blazak (2001) examined youth subcultures and noted that the norms developed within them emerge in resistance to the dominant culture. An example of this can be seen in a recent study of a particular youth subculture known as "straight edge". Haenfler's (2006) study of the predominantly male "straight edge" youth did find the movement to be based around resisting the dominant culture. In their case, the dominant culture is the youths' own peers. Straight edge youth do not drink alcohol, use drugs, engage in promiscuous sex, or eat meat. In contrast to the established norms of straight edge youth, and accepting Wooden and Blazak's characterization of youth subcultures (2001), the subcultures evaluated here, athletics and Greek organizations, can be said to resist the dominant culture by regularly engaging in heavy drinking (Strano et al. 2004; Alva 1998; Leichliter et al. 1998; Wechsler et al. 1997; Cashin et al. 1998; Overman and Terry 1991).

In their studies of subcultural theory, Sykes and Matza (1957) argued that many delinquents are essentially in agreement with the larger society about what is right and what is wrong, but they have created "techniques of neutralization" to explain those which deviate from the parent culture. They maintain that such techniques allow one exhibiting deviant behavior to justify the behavior and therefore render it nondeviant or conventional, allowing for a certain moral relativism. For example, a student who binge drinks might rationalize the behavior by saying, "There's nothing wrong with this, everyone drinks in college."

In contrast to the other involvements considered in this thesis, athletic and Greek organizations are characterized by their membership selection processes,

exclusivity, and group orientation and identification. With both Greek and athletic participation, students are penalized for nonparticipation, tardiness, or absences, often at the expense of their inclusion. Additionally, inclusion in the groups, as with many subcultures, often serves as a primary label on campus, allowing the students to self-identify as a basketball player or fraternity member. In contrast, for each of the remaining involvements, including wage work, volunteering, student organizations, and studying, students can self-select their level of involvement to a greater degree, and the membership processes tend to be open ones. Moreover, the involvements tend to be more focused on the individual than on a group. Students who spend more hours studying than average would not typically self-identify as a “studier” or “worker”, for example. While a student might identify as a “volunteer”, that type of involvement is not typically exclusive at the college level, and does not focus around group identity.

Given existing data examining drinking correlates of athletic and Greek-life involvement (discussed at length in the following section of this thesis), I expect these data to yield similar results and expect these involvements will show increased levels of bingeing. As this directly opposes Hirschi’s social bond theory, there is a need to answer why. It is hypothesized here that subcultural theory, given its foundation of internal norms and rituals, and resistance of a dominant culture, exclusivity through membership selection, and group orientation will explain why these two forms of involvement, athletic and Greek membership, differ from other forms of conventional involvement in their support of deviant behaviors. In order to more completely understand the need to find a new

explanation between athletic and Greek participation and bingeing, I will review the existing literature as it pertains to the relevant involvements and bingeing.

### **Involvement**

The relatively structured time spent outside of the classroom by students of all ages, referred to as “extracurricular activities,” is a vague construct often including wage work, athletic endeavors, religious activities, clubs, and volunteer activities to list a few (Hunt 2005; Eccles et al. 2003; Marsh and Kleitman 2002; Hunt and Rentz 1994). A problem with such a flexible definition is that each of the activities provides different levels of structure, adult interaction and supervision, time commitment, and peer interaction. The problem has been previously noted (Marsh 1992). To further complicate matters, the activities are structured by different sponsoring organizations including schools, churches, and private employers.

For the purpose of this thesis, to examine if conventional involvements influence frequency of bingeing during the college years, I considered work hours, hours spent on academic work, Greek life involvement, student organizations, athletic involvement, and volunteer activities. Given Hirschi’s rationale for the inclusion of involvement in the social bond theory, that a person may become too busy with conventional activities to find time for deviant or unconventional endeavors (p. 22), it is appropriate to include the most exhaustive possible list of all activities sanctioned, funded, encouraged, or advised by most college administrations as they could then be considered “conventional.” However, as the following literature illuminates, I do not expect athletics and Greek

involvement to fall within Hirschi's theory. I hypothesize I will find the opposite effect whereby athletic and Greek participation will be *positively* associated with bingeing. First, I review those involvements which I anticipate will be either negatively associated with bingeing or not associated with bingeing.

Wage work has been found to be associated with higher rates of deviance in high school students when they work more than ten hours per week (Kouvonen and Lintonen 2002). Other researchers have found differences in results depending on the type of work done, the responsibility entailed, and the student background (Staff and Uggen 2003). At the collegiate level, however, Strano et al. (2004) found nearly 30% of students not working at all had binged three or more times in the past two weeks, as opposed to students working full or part time, only 21% of whom were likely to have binged three or more times in the past two weeks. The authors found the difference between binge drinking at all or not in the past two weeks was significant ( $p < .004$ ), with those students who were working less likely to binge. Wechsler et al. (1995) also found students working for wages at least two hours per week were less likely to binge than those working less than two hours per week or not at all ( $p < .05$ ). None of the authors noted differences in their results by gender.

A second involvement previously found to be negatively associated with bingeing is volunteering. Wechsler et al. (1995) examined correlates of binge drinking and found spending any time doing volunteer work was negatively associated with bingeing,  $p < .05$ . Other studies have, without fail, found similar results for volunteering (Strano et al. 2004). Additionally, Weitzman and Kawachi

(2000) aggregated hours of volunteering by college and found that students attending colleges with higher than average hours of volunteering were 26% less likely to binge.

An example of a “conventional involvement” offered by Hirschi (1969) is the number of hours a student spends studying. Although the inclusion of such does not appear to be in line with other conventional activities considered in this thesis, it is a supported, encouraged, and funded (consider resource centers, free tutors, and the sprawling study spaces afforded students at many colleges) activity, in line with the requirements put forth. Study hours are, again, consistently shown to be negatively associated with bingeing. Wechsler et al. (1995) found students who spent four or more hours per day studying were less likely to binge than those who spent fewer than four hours per day studying,  $p < .05$ . Additionally, among students who do drink, Engs et al. (1996) found an inverse relationship between students’ GPA and the number of drinks consumed in a week.

Applying Hirschi’s (1969) social bond theory, Durkin et al. (1995) examined college student binge drinking. The study included 247 undergraduates, all younger than 21 years of age, who responded to a self-administered questionnaire. The authors found an overall inverse relationship between social bond theory measures (the authors’ operationalized measures for attachment, commitment, belief, and involvement) and frequency of binge drinking. The social bond element of focus related to this study, involvement, asked questions regarding a student’s hours per week spent both studying and

working at a job. In contrast to this thesis, Durkin et al. did not include measures of athletic or club participation, volunteer work, or Greek involvement, as might be expected in an undergraduate student's conventional use of time.

The measure of involvement used by Durkin et al. (1995), however, as assessed by an index of time spent studying and time spent working, revealed a negative correlation between the involvement index and frequency of binge drinking. The authors also found that while this bivariate relationship was statistically significant, it was not a significant predictor in the multivariate model which included all social bond variables. The authors summarize this finding by concluding that while involvement may be related to bingeing, the other social bond theory variables are stronger predictors of the behavior. This study hopes to build on the work of Durkin et al. by continuing their work with what is believed to be a more comprehensive, and hence better, measure of involvement.

Referring back to the difficulty of the language surrounding extracurricular involvements, student organizations are the most difficult involvement to classify because schools, students, and studies define them uniquely. Accordingly, the research around such involvements, especially as they pertain to college students, is far more limited. However, Wechsler et al. (1995) did ask a question pertaining to the number of hours students spend in "student organizations" and found no statistical difference between those who spend at least one hour per day in student organizations and those who spend no time in student organizations. This research hopes to elaborate on that data and more



thoroughly review involvements in student organizations as they relate to bingeing to see if more time in student organizations produces any effect on bingeing.

In stark contrast to the above mentioned forms of involvement, athletic participation and Greek membership consistently show positive correlations with binge drinking. Many studies have found that both types of involvement predict increased frequencies of binge drinking (Strano et al. 2004; Alva 1998; Leichter et al. 1998; Wechsler et al. 1997; Cashin et al. 1998; Overman and Terry 1991). Strano et al. found that members of fraternities or sororities were three times as likely to have engaged in binge drinking in the two weeks prior to the study, and were twice as likely to do so more frequently than those students not affiliated with such groups (2004). A study of 385 Greek members and 1518 non-Greek affiliated college students, using the Core Alcohol and Drug Survey, revealed that fraternity and sorority members reported consuming significantly higher levels of alcohol weekly where members reported 3.91 drinks per week and nonmembers reported 1.75 drinks per week. Alva (1998) found this difference to be significant at the  $p < .001$  level.

Similarly, measuring levels of involvement within Greek life, Cashin, et al. (1998) found that among men, increasing levels of involvement within fraternity life (ranked as: not involved in a fraternity, just a member, actively involved, or holding a position of leadership) corresponded with significantly higher use of alcohol, although the data do not establish causality. However, the researchers found that for women, there was a significant difference in the number of drinks consumed between those who were not involved in a sorority and those who

were involved at any level in a sorority, but the difference between those who were actively involved and those in leadership positions did not reach significance.

Previous studies of college students on athletic teams largely mirror those involved in a Greek system. Wechsler et al. (1997) examined the drinking behaviors of college athletes compared to the general college population and found 61% of men involved in athletics engaged in binge drinking compared with 43% of male non-athletes. The researchers found that women parallel the behaviors of men where 50% of those involved in athletics engaged in binge drinking as opposed to 36% of the female non-athletes (1997). Similarly reflective of the findings regarding binge drinking in the Greek system, Leichliter et al. (1998) evaluated the binge drinking behaviors of male and female athletes compared to non-athletes. The authors found a similar pattern among males and females where binge drinking increased as the degree of athletic involvement increased (ranked from nonparticipant to participant to team leader),  $p < .001$ . In concurrence with the study by Wechsler et al. (1997), Leichliter et al. (1998) also found that non-athletes drank less than either athletes in leadership positions or participant athletes.

Also testing Hirschi's theory, Igra and Moos (1979) considered one element of social bond theory, involvement, as a potential means of prevention. That study posits that involvement in formal activities will replace involvement in informal activities, including attending parties, concerts, and playing games. Unfortunately, the researchers created a muddled index of formal involvement

which included clubs, athletics, and achieved academic honors. While each of these can certainly be considered formal involvement, the context of each is so markedly different (as indicated by the research cited above) that they found this indicator one of only two that did not have independent effects on drinking. The present study expects to find that, if teased out individually, some of these formal involvements will be negatively predictive of bingeing, and some will be positively predictive of bingeing.

It was the goal of this thesis to elaborate on the work of Durkin et al. (1995) and Igra and Moos (1979) by considering an expanded and more clearly delineated list of involvement variables as they relate to binge drinking, and assessing if these processes operate similarly for men and women. Additionally, I analyze the data in relation to subcultural theory as an explanation for any possible variation of drinking rates by involvements. Based on subcultural theory, and previous research regarding alcohol use and athletic or Greek participation, it is expected that deviant subcultures will be positively associated with the frequency of bingeing, thereby contradicting social bond theory.

### **Hypotheses**

The previous sections of this chapter have outlined the data and dangers associated with binge drinking by college students. They have also laid out two theories which should equally explain the positive or negative association with binge drinking through participation in such collegiate involvements. This study seeks to integrate the work done by previous researchers, investigating the effect

of involvement on the frequency of binge drinking when all forms of conventional collegiate involvement are evaluated with these social deviance theories.

As this chapter has demonstrated thus far, there is some evidence that involvements including studying, volunteering, working, and, to some degree, participating in student organizations, could serve to prevent binge drinking. It has also been demonstrated that there is overwhelming evidence that some involvements, particularly athletic and Greek-life participation, support binge drinking. However, no study has examined the relationship between of a comprehensive inventory of these conventional involvements and the frequency of binge drinking within the theoretical frameworks of social bond and subcultural theories. It is the goal of this thesis to consider and evaluate those questions. Furthermore, the effects by gender have either not been thoroughly questioned, reported, or found in prior work and so it is an additional goal of this thesis to consider and report similarities or differences by gender.

In this review, it was illustrated that studying, working, and volunteering are associated with a reduced risk for binge drinking. The literature gave little indication of the effect, if any, of involvement in student organizations on binge drinking. However, considering the individual nature of that participation, and such organizations' relatively standard policies of open membership, as opposed to exclusive membership, student organizations will be included with these involvements where I expect to find a negative association between participation and binge drinking. Each of the above involvements is characterized by its individual focus

and self-selection into the involvement; they cannot be categorized as subcultures. Therefore, it is proposed that:

H<sub>1</sub>: Involvements characterized by individual focus and open membership, including working, studying, volunteering, and participation in student organizations, will be negatively predictive of binge drinking.

Referring to Fine and Kleinman's definition of a subculture (1979) in conjunction with Wolfgang and Ferracuti's (1967) subcultural theory, it has been put forth that athletics and Greek membership be considered subcultures. In contrast to the involvements listed above, subcultures are marked by a group-orientation and exclusive membership. Given the literature reviewed within, it is proposed that:

H<sub>2</sub>: Involvements characterized by a membership process, exclusive selection, and a group orientation, including athletic and Greek participation, will be positively predictive of binge drinking.

Table 1.1 Overview of Hypotheses 1 and 2		
Involvement	Hypothesis	
	Negatively Predictive	Positively Predictive
Study Hours	X	
Student Organizations	X	
Work Hours	X	
Volunteer Hours	X	
Athletic Hours		X
Greek Membership		X

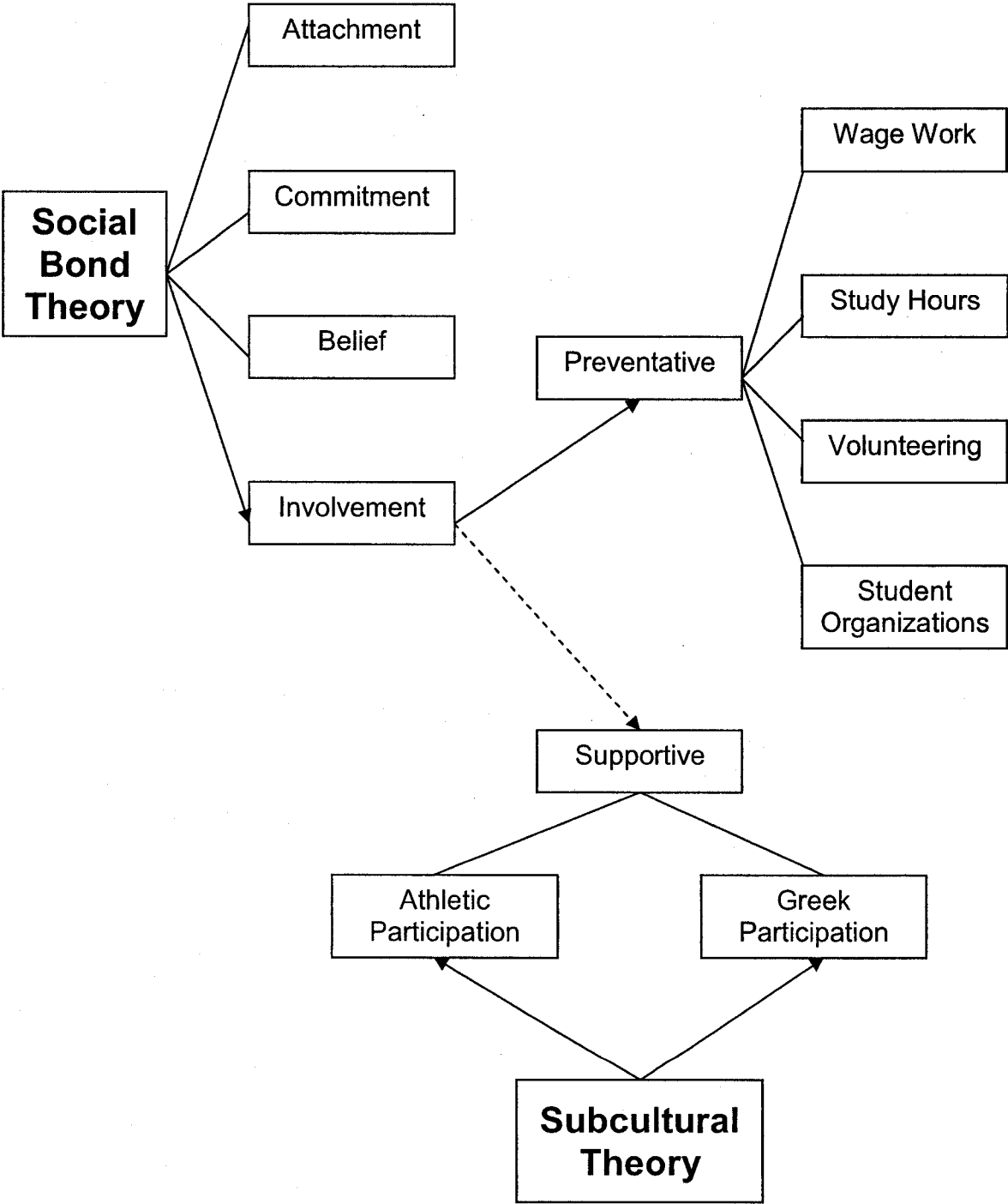
The hypotheses proposed above provide a means to test the existence of differences between "types" of involvement, and an explanation for any

differences. Given the established consequences of binge drinking on students, their grades, the colleges, and the communities, it is critical to gain a better understanding of the data and theories underlying the problem. Furthermore, this thesis aims to discern if there is a difference between any effect of involvement on binge drinking by males and females. Given the literature reviewed (Strano et al. 2004; Leichliter et al. 1998; Wechsler et al. 1997) and their consistent findings that binge drinking rates are similar for both men and women, the following is hypothesized:

H<sub>3</sub>: Regardless if the particular involvement serves as a supportive or preventative factor for binge drinking, the competing theories, social bond and subcultural theory, will function similarly for men and women.

In order to conceptualize the theories and elements at work in this thesis, I have developed an hypothesis model, shown in Figure 1.1. The next chapter provides the study design employed to test the above hypotheses.

Figure 1.1 – Hypothesis Model



## CHAPTER II

### METHODS

#### **Data**

The data for this study were collected in 2001 by Henry Wechsler et al. as part of the Harvard School of Public Health College Alcohol Study (CAS). The CAS was originally administered in 1993, then again in 1997 and 1999, and finally in 2001. A questionnaire was mailed to the residences of fulltime undergraduate students across the United States currently attending four-year colleges and universities. The data collected in 2001 comprise responses from 119 institutions and represent a random sample of the population. There are 10,904 observations and 483 variables in the study, with 10,521 observations used in this thesis after eliminating those observations where necessary questions were unanswered by respondents. Table 2.1 provides a summary overview of the demographic characteristics of respondents. The majority of respondents were white (76.25%), Christian (74.47%), and unmarried (93.62%). There were no notable demographic differences between males and females.

The variables represent information regarding students' lifetime drinking behaviors and reasons for such, problems experienced from drinking alcohol including troubles with the police and academics, views on state and college alcohol policies, overall college performance and involvements, sexual behaviors, religious beliefs, living situations, tobacco and illicit drug use,



Table 2.1 Demographic Overview of Respondents

Variable	Percentage		
	Total n=10,521	Male n=3765	Female n=6756
Race/Ethnicity			
White	76.25	76.07	76.59
Black / Af. Amer.	7.30	7.87	6.28
Asian / Pac. Isl.	7.72	7.45	8.20
Other	8.73	8.61	8.93
Of Hispanic or Spanish Origin			
Yes	7.74	7.80	7.71
No	92.26	92.20	92.29
Religion			
None	14.79	14.47	15.37
Catholic	35.47	35.72	35.02
Jewish	2.81	2.60	3.19
Islamic	1.16	.77	1.87
Protestant	39.00	39.29	38.46
Other	6.77	7.15	6.09
Class			
Freshmen	23.10	22.26	23.57
Sophomores	21.63	21.52	21.69
Juniors	24.72	24.92	24.61
Seniors	22.77	21.65	23.39
5thYr. or Beyond	7.13	9.12	6.02
Grad. Student	.65	.53	.71
Marital Status			
Never Married	91.56	92.17	91.21
Married	6.38	6.02	6.59
Divorced	1.61	1.33	1.77
Separated	.33	.40	.30
Widowed	.11	.08	.13
Mother's Education			
<HS Diploma	5.45	5.52	5.40
HS Diploma	21.94	21.75	22.04
Some College	29.46	27.86	30.34
College Degree	41.73	43.29	40.85
Don't Know / NA	1.44	1.57	1.36
Father's Education			
<HS Diploma	6.12	6.08	6.14
HS Diploma	17.76	15.56	18.99
Some College	25.28	24.41	25.77
College Degree	47.89	51.16	46.06
Don't Know / NA	2.95	2.79	3.03

general health and exercise habits. Demographic information includes age, height, weight, marital status, ethnicity, race, and parent's education and alcohol consumption behaviors. The CAS was selected as the data source for this study based on its vast array of questions, offering measures for all necessary beliefs, behaviors, and demographic data to apply tests of social bond theory and subcultural theory to binge drinking.

### **Measures**

Binge drinking – The dependent variable for the study was created as an index variable after standardizing answers to the following questions: (a) Think back over the last two weeks. How many times have you had five or more drinks in a row; and (b) In the past 30 days, how often did you drink enough to get drunk? (By drunk we mean unsteady, dizzy, or sick to your stomach). The questionnaire provided respondents with the definition of a drink as “a 12 oz. can or bottle of beer; a 4 oz. glass of wine; a 12 oz. bottle or can of wine cooler; or a shot of liquor straight or in a mixed drink” (Wechsler 2001: 6). Response options for this item ranged from “not at all” to “40 or more occasions.” As such, the measure for binge drinking for the thesis is five drinks in one sitting, and the frequency of bingeing is measured by the number of times a student has binged in the past 30 days. The responses for each item were standardized, and a new index variable was created with the two items to measure the frequency of binge drinking. It is expected that considering these two questions together offered a more reliable estimate of students' bingeing frequency than considering either

question independently. After the items were standardized and indexed, the responses ranged from -1.36 through 8.16 ( $sd=1.87$ ).

Involvements – Involvement was operationalized by Igra and Moos (1979) as membership in school organizations, athletic participation, and achievement of academic honors. While this thesis attempts to get at the same information, with the benefit of more recent studies of bingeing correlates (Wechsler et al. 1997), it is not hypothesized here that all types of involvement will yield the same results, and so they are not categorized together.

A more recent study interested in applying social bond theory to collegiate bingeing created an index variable of hours spent studying and hours spent working at a job as indicators of involvement (Durkin et al. 1999). Both of these factors are considered in the current study, although they are not considered here to be an exhaustive list of involvements. For this thesis, involvement, as the focal independent variable, includes wage work, volunteer hours, study hours, athletic participation, Greek membership, and participation in student organizations.

The independent variables measure student involvement in conventional activities in hours spent performing wage work, volunteer work, studying, in student organizations, and athletics. The response options range from zero hours per day to five or more hours per day. Given that a core tenet of social bond theory is the limited amount of time in one's life, it is ideal to measure the time spent in such conventional activities. Without the requisite questions

available, Greek participation is necessarily measured as a dichotomy of membership.

Those involvement variables hypothesized to be negatively correlated to bingeing (work, volunteering, studying and student organizations) were also indexed to create a scale of average number of hours spent in such activities daily. Given that Greek participation is measured only in terms of membership (yes/no), such an index was not possible for those involvements hypothesized to support bingeing (athletic and Greek participation). As such, athletic participation was dummy-coded into those who participate at all, and those who do not. Then a new variable was created by dummy-coding (1) those students who participate in both athletics and Greek life.

Social bonds – Applying Travis Hirschi's social bond theory, control variables included belief in the rules of the society, commitment to conformity, and attachment to the institution. Referencing a 1999 study by Durkin et al., it was determined that an index variable could be created for the components, and they could be controlled for in order to compare involvement measures against drinking measures. There were only two variables to measure the social bond constructs, eliminating the option of factor analysis. However, I was able to establish the bivariate correlation (see Table 2.2) between the variables in order to ascertain the extent to which they were measuring the same construct.

The belief component of social control theory refers to a general acceptance of the rules of a society as being valid and binding. The following two questions were used to ascertain students' belief in the rules: (a) Do you

agree with the way your college is dealing with students alcohol use; and (b) What should be the legal minimum drinking age? Responses for the first question included, "Agree strongly / Agree / Disagree / Disagree strongly". The responses were divided into those who agree and those who disagree. Responses for the second question ranged from "17 or under / 18 / 19 / 20 / 21 or older." Responses for this question were split into those who agree with the current rules of society (21 or older) and those who do not. Responses for each question were then dummy-coded into those who believe in the current rules of the institution (1), and those who do not (0). Most of the students, 69.76%, agreed with the way their college deals with student alcohol use. Fewer students, 44.75%, agreed with the established legal drinking age. Although the bivariate correlation between the two questions established consistency (.048,  $p < .001$ ), the coefficient is low and so they were controlled for as individual indicators of belief.

For past studies of social bond theory, commitment has been operationalized as avowed dedication to various institutions including religion, school and family (Durkin et al. 1999; Cherry 1987; Igra and Moos 1979). Referring to a measure by Igra and Moos (1979), a combination of items from the religious and school domains were used to index the commitment component of social bond theory. The following questions aimed to measure students' commitment: (a) How important is it for you to participate in academic work at college; and (b) How important is it for you to participate in religion at college? These questions attempt to quantify a student's commitment to school and

religion, and the scores were summed to create an index variable of commitment. Response options for each item ranged were reversed from their original coding resulting in a range from one (not at all important) to four (very important). It was not expected that a student who scores high on the 'commitment to school' scale would necessarily score high on the 'commitment to religion' scale. The items were, however, indexed as a student high on both the school and religion measures would be considered high on commitment and a student who is low on both measures would be considered low on commitment, or dedication to the institutions. Based on the social bond theory, those who score high on the commitment scale would be less likely to commit deviant acts. On the established commitment scale, ranging from two through eight, the mean was 5.98 (sd=1.38).

It is notable that previous research has been unable to establish a consistent association between religiosity and deviance for youth. Researchers have found differences between males and females (Poulson et al. 1998) where religious conviction was not significantly associated with deviance for the men, but was for the women. Other research found negative associations for men *and* women between religiosity and deviance, specifically regarding binge drinking (Dunn 2005). Still other research has determined that the lack of consistent results is due to the lack of a multidimensional, valid and reliable religiosity scale (Sharma 2006). Given this information, all regressions were run controlling for commitment to religion independently from commitment to academics and compared to coefficients from regressions including the created commitment

index. Given that coefficients did not change significantly with either test, the index was maintained as the measure of commitment.

Table 2.2 Zero-order Correlations for Social Bond Control Variables

	1	2	3	4	5	6	7	8	9
1. Comt1	-								
2. Comt2	.150 ***	-							
3. Comt3	.573 ***	.896 ***	-						
4. Belief1	-.006	-.003	-.005	-					
5. Belief2	.020 *	.192 ***	.168 ***	.048 ***	-				
6. Attach1	.158 ***	.118 ***	.169 ***	.135 ***	.045 ***	-			
7. Attach2	.101 ***	.122 ***	.147 ***	.100 ***	.045 ***	.484 ***	-		
8. Attach3	.148 ***	.139 ***	.182 ***	.135 ***	.052 ***	.845 ***	.877 ***	-	
9. Attach4	.087 ***	.127 ***	.145 ***	.014	.038 ***	.148 ***	.163 ***	.181 ***	-

\*p<.05      \*\*p<.01      \*\*\*p<.001

Note: Commitment: Comt1 – How important is it for you to participate in academic work in college? Comt2 – How important is it for you to participate in religion in college? Comt3 – Index measure of Comt1+Comt2. Belief: Belief1 – Do you agree with the way your college deals with alcohol use? Belief2 – What should be the legal minimum drinking age? Attachment: Attach1 – How satisfied are you with the education? Attach2 – How satisfied are you with your life at school? Attach3 – Index measure of Attach1+Attach2. Attach4 – Do you know a member of the administration or faculty with whom you can discuss a personal problem?

The third component of social bond theory is attachment, which refers to the ties a student has to significant others, classified here as faculty or staff of the college, and general attachment to the college. The index was created using the following questions: (a) In general, how satisfied are you with the education you are receiving; and (b) In general, how satisfied are you with your life at school? Response options for both questions were reversed from the original coding so they ranged from “very unsatisfied” (1) to “very satisfied” (4). In a bivariate

analysis, the items did appear related (.484,  $p < .001$ ) and so an index was created whereby a higher score indicates greater attachment to the institution and the range was two through eight (mean=6.72, sd=1.22). An additional dummy-coded question, "Do you know a member of the administration or faculty with whom you can discuss a personal problem?" was included as a control variable to indicate attachment to the institution (57.02% do know a faculty or staff member with whom they can talk).

Socioeconomic Status – Respondents were not asked directly about their own, or their parents', income, and, as such, a proxy was implemented. In this thesis, socioeconomic status (SES) was measured by the respondent's parents' combined level of education, as established by an index created by adding the mother's education to the father's education. Response options for mother and father's education included: less than high school (1), high school (2), some college (3), and four year college degree or more (4). In cases where respondents were unsure of the mother's level of education, the mean value of mothers' education was assigned (mean=3.09, sd=.92). The same process was used to assign father's level of education (mean=3.18, sd=.93). The range for the final index was two through eight and the mean indicator for SES was 6.27 (sd=1.62).

High school drinking – Understanding that binge drinking does not always begin in college, some students may choose to participate in certain activities *because* of their proclivity for binge drinking. For this reason, the study controlled for high school drinking behaviors as measured by the following question: During



your last year in high school, on how many occasions did you have five or more drinks in a row? Response options ranged from “never” to “40 or more occasions” and a drink is defined as a 12 oz. can or bottle of beer; a 4 oz. glass of wine; a 12 oz. bottle or can of wine cooler; or a shot of liquor straight or in a mixed drink. The mean response was 2.26 (sd=1.81), indicating students had, on average, binged one or two times during their last year in high school.

Age – Students’ age was measured as an interval-like variable with responses ranging from “17 or younger”, to 18, 19, 20, 21, 22, 23, 24, or “25 or older”. The mean age was 20.81 (sd=2.04).

Gender – Gender was a dummy-coded variable where females were coded as zero (0) and males as one (1). 64.21% of respondents were female.

Race / Ethnicity – The question posed asks which racial or ethnic category describes the respondent best, and possible options included “White” (n=7961, 76.25%), “Black / African American” (n=762, 7.30%), “Asian / Pacific Islander” (n=806, 7.72%), “Native American Indian / Native Alaskan” (n=58), or “Other” (n=864). Given the relatively small sample of Native American Indian / Native Alaskan and use of ethnicity as a control, rather than focal variable, this category was collapsed into “Other” (n=922, 8.73%).

### **Analysis**

The hypotheses for this study were tested primarily through multivariate regressions. First, zero-order correlations were used to test the bivariate association between each of the variables and frequency of binge drinking. The associations were then run for men and women separately to identify any initial

differences in the frequency of binge drinking. All analyses were conducted using the software package STATA 9.2.

Ordinary least square (OLS) regression models were used to further test to what extent each of the individual involvements were associated with the frequency of binge drinking. The first battery of tests, designed to test  $H_1$  and  $H_2$ , analyzed the main effect of each type of involvement on bingeing when controlling for demographic items including gender, age, race, socioeconomic status, high school drinking, and social bond variables including attachment, belief, and commitment. The second battery of regressions, designed to test  $H_3$ , analyzed any interaction effects of gender on the type of involvement on the frequency of binge drinking.

## CHAPTER III

### RESULTS

The zero-order correlation coefficients for the variables included in this study are shown in Table 3.1. Each of the bivariate relationships between the frequency of binge drinking and social bond control variables were significantly negative for both men and women, except for the first measure of attachment (Attachment 1). The measure is an index representing general satisfaction with education and life at school. There is a positive association for the measure with the frequency of binge drinking for both men and women, and for men, that measure is significant ( $r=.043$ ,  $p<.01$ ).

In the bivariate model, all focal independent variables were associated as hypothesized with the notable exception of hours spent in student organizations (Org hours) by males. It was hypothesized that participation in student organizations would be associated with a decreased frequency of binge drinking. Contrary to the hypothesis, males participating in student organizations were associated with an increase in their frequency of binge drinking ( $r=.029$ ), but the measure is not significant. The hours a student spent studying shows the strongest negative association with the frequency of binge drinking (female  $r=-.104$ ,  $p<.001$ ; male  $r=-.131$ ,  $p<.001$ ) and the hours spent volunteering have equal significance for men and women ( $p<.001$ ) where  $r=-.056$  and  $-.060$  respectively. These correlations, while not strong, are significant. The other

Table 3.1 Zero-Order Correlations and Means for all Variables Included in the Study

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Freq. of binge drinking	-	-.095 ***	.182 ***	-.117 ***	-.106 ***	-.066 ***	.086 ***	-.131 ***	-.041 **	.029	.072 ***	.202 ***	-.056 ***	-.188 ***	-.119 ***	-.310 ***	.043 **	-.078 ***	.557 ***
2. Age	-.090 ***	-	-.056 ***	.079 ***	.005	-.005	-.161 ***	.060 ***	.209 ***	-.076 ***	-.080 ***	-.026	.067 ***	-.058 ***	.055 ***	.195 ***	-.009	.060 ***	.033 *
3. White	.208 ***	-.066 ***	-	-.440 ***	-.511 ***	-.536 ***	.210 ***	-.098 ***	-.067 ***	-.035 *	-.043 **	.045 **	-.078 ***	-.051 **	-.088 ***	-.132 ***	.088 ***	.022	.163 ***
4. Black	-.129 ***	.041 ***	-.493 ***	-	-.078 ***	-.078 ***	-.067 ***	.048 **	.104 ***	.043 **	.102 ***	-.023	.070 ***	.148 ***	.048 **	.093 ***	-.007	.072 ***	-.138 ***
5. Asian	-.112 ***	.008	-.479 ***	-.083 ***	-	-.091 ***	-.086 ***	.082 ***	-.063 ***	.019	-.018	-.028	.029	-.049 **	.079 ***	.060 ***	-.064 ***	-.052 **	-.138 ***
6. Other race/ethnicity	-.089 ***	.040 ***	-.518 ***	-.089 ***	-.088 ***	-	-.168 ***	.034 *	.075 ***	.011	-.001	-.024	.028	.001	.014	.059 ***	-.055 ***	-.036 *	.010
7. SES	.100 ***	-.190 ***	.188 ***	-.090 ***	-.037 **	-.152 ***	-	-.012	-.153 ***	.027	.028	.049 **	-.048 **	.018	-.050 **	-.118 ***	.040 **	.015	.044 **
8. Study hours	-.104 ***	.029 *	-.092 ***	.057 ***	.061 ***	.032 **	-.003	-	-.058 ***	.139 ***	.043 **	-.010	.114 ***	.199 ***	.035 *	.055 ***	.123 ***	.086 ***	-.077 ***
9. Work hours	-.022	.170 ***	-.042 ***	.035 **	-.040 ***	.070 ***	-.172 ***	-.056 ***	-	.037 *	-.052 **	-.012	.078 ***	-.033 *	.016	.081 ***	-.050 **	.016	-.006
10. Org hours	-.003	-.140 ***	-.017	.073 ***	-.002	-.020	.084 ***	.158 ***	-.053 ***	-	.180 ***	.271 ***	.319 ***	.151 ***	-.011	-.032 *	.123 ***	.160 ***	-.046 **
11. Athletic hours	.040 ***	-.113 ***	.034 **	-.023	-.024 *	-.012	.055 ***	.051 ***	-.055 ***	.161 ***	-	.031	.127 ***	.080 ***	-.024	-.015	.074 ***	.090 ***	.025
12. Greek member	.147 ***	-.027 *	.088 ***	-.031 **	-.048 ***	-.052 ***	.056 ***	-.010	-.077 ***	.279 ***	.002	-	.089 ***	.052 **	-.045 **	-.093 ***	.064 ***	.003	.099 ***
13. Volunteer hours	-.060 ***	.020	-.068 ***	.099 ***	-.008	.019	.011	.130 ***	.027 *	.330 ***	.075 ***	.058 ***	-	.143 ***	-.034 *	.041 **	.076 ***	.125 ***	-.035 *
14. Commitment	-.169 ***	-.101 ***	-.053 ***	.149 ***	-.052 ***	.005	.038 **	.146 ***	-.066 ***	.174 ***	.036 **	.062 ***	.137 ***	-	.026	.171 ***	.219 ***	.169 ***	-.177 ***

15. Belief 1	-.046 ***	.002	-.030 *	.013	.037 **	.001	-.043 ***	.011	-.000	-.025 *	.013	-.015	-.026 *	-.033 **		.078 ***	.130 ***	.006	-.115 ***
16. Belief 2	-.273 ***	.231 ***	-.139 ***	.108 ***	.068 ***	.056 ***	-.122 ***	.041 ***	.070 ***	-.034 **	-.053 ***	-.045 ***	.056 ***	.161 ***	.026 *		.065 ***	.060 ***	-.246 ***
17. Attach- ment 1	.014	-.013	.101 ***	-.069 ***	-.067 ***	-.026 *	.065 ***	.096 ***	-.089 ***	.132 ***	.059 ***	.067 ***	.051 ***	.152 ***	.134 ***	.039 ***		-.172 ***	.023
18. Attach- ment 2	-.058 ***	.048 ***	.057 ***	-.007	-.087 ***	.004	.013	.078 ***	-.009	.151 ***	.056 ***	.025 *	.109 ***	.124 ***	.014	.021	-.182 ***		-.075 ***
19. HS binging	.495 ***	.025 *	.182 ***	-.134 ***	-.119 ***	-.043 ***	.030 *	-.098 ***	.025 *	-.075 ***	.013	.054 ***	-.062 ***	-.149 ***	-.008	-.197 ***	-.053 ***	-.054 ***	
Mean Value or Proportion	0	20.74	.76	.07	.08	.09	6.30	2.79	2.26	.79	.32	.13	.44	3.99	.70	.45	3.27	.58	2.13

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

Males represented above the diagonal  
Females represented below the diagonal

involvement predicted to prevent binge drinking, hours spent working for wages ( $r = -.022$ ) (Work hours) was not significant for females. However, the relationship between the frequency of binge drinking and working for wages was significant for males ( $r = -.041$ ,  $p < .01$ ).

Conversely, and as hypothesized, Greek participation (Greek member) was positively associated with binge drinking and had the strongest relationship of all involvements for both men and women (female  $r = .147$ ,  $p < .001$ ; male  $r = .202$ ,  $p < .001$ ). Finally, athletic participation (Athletic hours) was also significantly positively associated with binge drinking (female  $r = .040$ ,  $p < .001$ ; male  $r = .072$ ,  $p < .001$ ). Again, it must be noted that while the correlations are not strong, they are significant. Additionally, the practical implications of the correlation will have to be established as further research is able to replicate the findings.

OLS regression models were applied to control for the effects of demographic and other social bond variables in order to better assess the strength of relationships between involvements and frequency of binge drinking. Table 3.2 presents the coefficients and significance for each type of involvement with demographic controls in the models.

Study Hours – The mean number of hours spent studying per day was 2.78 ( $sd = 1.44$ ) and the range for this item was zero through five hours. In the zero-order correlation model, study hours had the strongest inverse relationship with the frequency of binge drinking for both men and women. When multivariate regression was used, study hours was still significant for the total sample

( $p < .001$ ) with control variables. Reflective of previous research and in accord with the hypotheses, the average number of hours a student studied had the strongest association with a lower frequency of binge drinking.

Student Organizations – The mean number of hours spent participating in student organizations was .77 (sd=1.22) and the range for the item was zero through five hours per day. The results for participation in student organizations did not support the hypotheses presented. With demographic and social bond variables controlled for, participation in student organizations contradicted the proposed hypothesis and was instead positively associated with binge drinking ( $p < .001$ ). With these results I fail to reject the null  $H_1$  as it relates to participation in student organizations.

Variable	1.	2.	3.	4.	5.	6.	7.
1. Study Hrs	-.070***						-.071***
2. Student Orgs		.072***					.037**
3. Work Hrs			-.007				.004
4. Volunteer				-.035*			-.047**
5. Athletic Hrs					.070***		.071***
6. Greek						.664***	.630***
Gender (male=1)	.174***	.196***	.193***	.192***	.180***	.199***	.154***
Age	-.054***	-.052***	-.055***	-.056***	-.053***	-.056***	-.048***
White	.176	.168	.183	.180	.188	.162	.151
African American	-.032	-.078	-.041	-.040	-.049	-.042	-.043
Asian	-.100	-.153	-.130	-.128	-.123	-.124	-.106
Other Race	-.184	-.212	-.192	-.195	-.192	-.185	-.180
SES	.031**	.028**	.029**	.030**	.029**	.026**	.025**
H.S. Binging	.488***	.493***	.491***	.491***	.490***	.483***	.480***
Belief 1	-.183***	-.177***	-.182***	-.184***	-.183***	-.173***	-.174***
Belief 2	-.536***	-.523***	-.531***	-.532***	-.530***	-.506***	-.502***
Commitment	-.121***	-.139***	-.131***	-.129***	-.133***	-.141***	-.133***
Attachment 1	.115***	.103***	.109***	.110***	.106***	.099***	.100***
Attachment 2	-.115***	-.147***	-.124***	-.120***	-.133***	-.126***	-.127***
R <sup>2</sup>	.348	.348	.346	.346	.347	.359	.364

\* $p < .05$

\*\* $p < .01$

\*\*\* $p < .001$

Wage Work – The mean number of hours spent working per day was 2.28 (sd=2.09) and the range was zero through five. The number of hours a student worked on average per day was not significant in this OLS regression model. With a regression coefficient of -.007, the results do not broach significance. Given the lack of an established relationship, I fail to reject the null  $H_1$  as it relates to working for wages having any influence over the frequency of binge drinking.

Volunteering – The average number of hours spent volunteering was .44 (sd=.98) per day and the range for this item was zero through five. In agreement with  $H_1$  as it applies to hours spent volunteering, this form of involvement was significantly negatively associated with frequency of binge drinking ( $p<.05$ ). However, these results must be considered in the context of the sample size ( $n=10,521$ ) given that such a large sample can detect small differences. However, in accordance with convention, there is support for  $H_1$  as it relates to average hours spent per day volunteering.

Athletics – The mean number of hours spent participating in varsity athletics per day was .33 (sd=.98) and the range for the item was zero through five. Athletic participation was hypothesized to be one of two forms of involvement positively predictive of frequency of binge drinking. When the regression model was used, hours spent in varsity athletic participation was significantly associated with increased binge drinking ( $p<.001$ ). Mirroring



previous research, this association supports H<sub>2</sub> as it relates to athletic participation.

Greek Life – A total of 12.42% of the sample were members of a fraternity or sorority organization. In the zero-order correlation model, participation in Greek life had the strongest relationship with frequency of binge drinking of all models considered. When the OLS regression model was applied, this finding remained significant for the total sample ( $p < .001$ ). Again in agreement with previous research, this finding supports H<sub>2</sub> as it applies to Greek involvement.

The following figure (Table 3.3) illustrates the results of each regression described above. In accord with the hypotheses (H<sub>1</sub>), both hours spent studying and volunteering were negatively associated with the frequency of binge drinking. Contrary to the hypotheses, hours spent working had no apparent association with the frequency of binge drinking, and hours spent participating in student organizations has a positive association with the frequency of binge drinking. Hours spent participating in varsity athletic endeavors and participation in a Greek organization also had a positive association with the frequency of binge drinking, as predicted by the hypotheses (H<sub>2</sub>).

Table 3.3 Overview of Results of Hypotheses 1 and 2			
Involvement	Results		
	Negatively Predictive	Positively Predictive	No Association
Study Hours	X		
Student Organizations		X	
Work Hours			X
Volunteer Hours	X		
Athletic Hours		X	
Greek Membership		X	

Gender Differences – H<sub>3</sub> predicted that for all forms of involvement the processes influencing the frequency of binge drinking, either positively or negatively, would function similarly for men and women. To test this hypothesis, interaction effects were tested applying OLS regression and including all control variables. As illustrated in Table 3.4, this hypothesis is supported for only three of the six forms of involvement. Interestingly, for two of the involvements where the processes do not appear to operate similarly between genders, and participation has a significantly stronger positive correlation with the frequency of binge drinking for men than for women (Greek and athletic participation), there is a group orientation. Similarly, hours spent studying, a more individual endeavor, has a significantly stronger negative correlation for men than for women.

Table 3.4 Regression Coefficients of Binge Drinking on Interaction Effect of Gender and Involvements

Variable	1.	2.	3.	4.	5.	6.
Gender (male=1)	.295***	.122**	.208***	.174***	.128***	.117***
Study Hrs	-.051***	-.071***	-.072***	-.072***	-.071***	-.072***
Student Orgs	.036*	.022	.038**	.037*	.038**	.037*
Work Hrs	-.004	-.005	.005	-.004	-.004	-.005
Volunteer	-.048**	-.046**	-.047**	-.032	-.048**	-.048**
Athletic Hrs	.071***	.070***	.071***	.072***	.035	.070***
Greek	.631***	.630***	.632***	.632***	.628***	.524***
1. Gender*Study Hrs	-.053**					
2. Gender*Student Orgs		.042				
3. Gender*Work Hrs			-.024			
4. Gender*Volunteer				-.054		
5. Gender*Athletic Hrs					.074*	
6. Gender*Greek						.294**
R <sup>2</sup>	.364	.364	.364	.364	.364	.364

\*p<.05

\*\*p<.01

\*\*\*p<.001

Note: Tests include all demographic and social bond control variables (not shown)

The main effect of participating in varsity athletics is positively associated with the frequency of binge drinking (p<.001). Additionally, there is a stronger

relationship between male involvement in athletics and their frequency of binge drinking than there is for females ( $p < .05$ ). Where there is an equal increase in the number of hours participating in athletics, there is a significantly greater increase in the frequency of binge drinking for males than for females.

Greek membership is the second form of involvement where I fail to reject the null  $H_3$ . It was hypothesized that membership in a Greek organization would have the same effect on males as females regarding their frequency of binge drinking. Similar to athletic participation, and reflective of the literature, the main effect of Greek participation is positively associated with the frequency of binge drinking. Additionally, males participating in Greek life are binge drinking significantly more frequently than females participating in Greek life ( $p < .01$ ).

In contrast to athletic and Greek participation, the main effect of study hours regressed on the frequency of binge drinking was negative ( $r = -.076$ ,  $p < .001$ ). The interaction effect is also in contrast to those previous forms of involvement, as there is a stronger negative correlation between hours spent studying and frequency of binge drinking for men than for women ( $p < .01$ ).

The effect of a student's hours spent working, volunteering, and participating in student organizations on binge drinking was similar for men and women. The processes influencing the effect of each of these forms of involvement on the frequency of binge drinking, either positively or negatively, appear to operate similarly for men and women. These findings offer support for  $H_3$  as it applies to working, volunteering, and participating in student organizations. In all cases, however, there is the possibility of a Type I error.

Given the large sample size and small coefficients, future research will have to replicate these findings.

## CHAPTER IV

### DISCUSSION

Binge drinking, while not a new phenomenon, is the topic of much current discussion regarding college students. The ramifications of the behavior are well established (Hingston et al. 2005; Mohler-Kuo et al. 2004; Powell, Williams and Wechsler 2004; Perkins 2002; Wechsler et al. 1998; Engs et al. 1996; Wechsler et al. 1995; Engs and Hanson 1994), and they are dangerous not just for those who partake, but for their peers, and the greater college and local communities. It was the goal of this study to gain greater awareness of the processes which help support or prevent binge drinking as they relate to conventional collegiate involvements by examining the relationship between each involvement and the frequency of bingeing. It was an additional goal of this thesis to examine if these processes operate similarly for men and women.

In addressing this purpose, it was hypothesized that group-oriented, exclusive forms of involvement would align with subcultural theory, and therefore support deviant behaviors such as binge drinking. Greek and athletic participation were both considered subcultures and consequently expected to be positively associated with an increased frequency of bingeing. As the only hypothesis to be entirely supported by the data, both were significantly associated with an increased frequency of binge drinking.

Interestingly, and in contrast to the hypothesis, participation in student organizations also fell into this category where increased participation was positively associated with increased frequency of bingeing. Several potential explanations exist for this relationship. First, and most obviously, the “student organizations” category can encompass as many activities as students can create. For example, the category may include organizations focused around volunteering (Circle K International), athletics (ultimate Frisbee and rugby), politics (Young Republicans or Democrats), academics (debate club and literature groups), social causes (Operation Smile and environmental groups), or common interests or hobbies (cooking, gaming, and investing). While a common denominator is not easy to ascertain, the groups are each united by close peer associations and are reflective of what the youth value.

In this case, neither social bond theory nor subcultural theory seems to fully explain the frequency of binge drinking. It would be of interest to examine the results in light of Akers’ differential association-reinforcement theory (1973). Derived from Sutherland’s 1947 differential association theory, and further, social learning theory, Akers suggests deviant behavior is learned through the punishment and reinforcement applied after the behavior has taken place. In cases where students are surrounded by other students and are subject to the punishment and reinforcement of students, youth-accepted deviant behavior, such as binge drinking, would be positively reinforced (p. 50). Where college students are not binge drinking near parents or administrators, who may apply punishment, they are receiving a greater amount of feedback about the behavior

from their peers. Given this theory, simply classifying a group as a subculture would not be enough to predict if the group would encourage deviant norms. Instead, it must also be considered if the group is largely reflective of youth values and predominantly peer-based.

When considering the influence of peer-based groups on deviance, it would be interesting also to study the influence of peers on males as opposed to females. If males are more influenced by the expectations and rewards offered by peers than females, it could serve to explain the gender difference in the frequency of bingeing in positively associated involvements (Greek and athletic participation). For example, in a study of adolescent smoking, Wang and Fitzhugh (1997) found that for males, having a best male friend who smokes was the only social influence variable significantly associated with males moving from non-smoker status to regular smoker status. However, for females, mother smoking, older sister smoking, or three or four best *male* friends all smoking were all social influences significantly associated with females transitioning from non-smoker to regular smoker. It is possible that the processes influencing binge drinking are similar to those influencing adolescent smoking and that could account for the difference between influence of involvements on binge drinking between males and females. Where athletics and Greek life are predominantly single-sex activities, females would not have the male influence to support binge drinking to the extent that males would have males around to support or encourage bingeing.

Another possible explanation for the positive association between student organizations and the frequency of bingeing is an omission in the questionnaire of Greek participation in the list of "time spent" questions. Where all other involvements were directly inquired about in the sixth section of the questionnaire, Greek membership was addressed five sections prior, and students may have felt the need to somehow quantify that time as a form of involvement. "Student organizations" would have been the only appropriate category in which to note their Greek involvement and, as such, that would have affected the results of the involvement towards increased frequency of bingeing as evidenced by the positive Greek association with frequency of bingeing. This theory may additionally be supported by the zero-order correlation between Greek membership and time spent volunteering (female  $r=.058$ ,  $p<.001$ ; male  $r=.089$ ,  $p<.001$ )

A finding interesting for its deviation from the hypotheses, is that of the lack of a significant association between work hours and frequency of bingeing. Strano et al. (2004) studied the effect of work on college students as it correlated to their frequency of bingeing and found those students who were working had fewer bingeing experiences in the past three weeks. This study did not have the same results as there was no significant association between the two. However, Staff and Uggen (2003) studied the relationship between deviance and hours worked for high school seniors and found the relationship depended on the type of work being done. It is possible the same processes are operating in this study. Staff and Uggen found that where work was compatible with educational



roles or provided learning opportunities, deviance was reduced. In contrast, where work was focused on “adult conceptions of job quality” (2003, p. 284) such as autonomy, high wages, or social status, deviance increased. If that is the process operating at the college level in this survey, the student in this study who is working ten hours per week at a bar would serve to “cancel out” the student who is working ten hours a week at a law firm, rendering the findings nonsignificant.

The theoretical hypotheses were also unsupported regarding the expected gender-neutral effect of studying on binge drinking. While the data supporting the negative association between the number of hours spent studying and the frequency of binge drinking are significant ( $p < .001$ ), there is a stronger effect for men than for women ( $p < .01$ ). There is little to explain why this difference between males and females would appear for studying, but not for other forms of individual-based involvement like hours spent working, for example. With hours spent working, the gender-orientation appears similar in that it is negative ( $r = -.024$ ), but the difference is nonsignificant. Future research will have to investigate further the unique and different social influences as they apply to men and women.

The only form of involvement to be completely consistent with all hypotheses was volunteer participation. Students who spent more time volunteering binge drank less frequently ( $p < .05$ ). Additionally, and in agreement with the hypothesis that this effect should be similar for men and women, the

association was not gender oriented. Both males and females have similar rates of binge based on the number of hours spent volunteering.

### **Practical Implications**

One particular goal of this study was to determine if the processes affecting the binge drinking patterns of males and females are similar. Based on the results for participation in athletics and Greek life, and time spent studying, it would appear they are operating, to some extent, differently. Given the lack of consistent results either within hypothesized models or between genders, prevention and intervention programs should be tailored to specific groups, rather than one-size-fits-all models. The findings support niche-targeted approaches for both prevention and harm-reduction programming and education about binge drinking, especially with regard to gender.

Additionally, accepting that academics are the primary purpose of higher education, college administrations are advised to focus on the importance of that primary goal. Students could be rewarded (more immediately than on a report card at the end of a semester) for their time spent in academic resource centers, libraries, study groups, or for meeting a challenge of a certain number of hours spent studying. Because this item had the strongest negative association with the frequency of binge drinking, it should be exploited as a means to reduce harmful bingeing, in addition to forwarding the primary mission of academic institutions.

If future studies bear out that the association between work and the frequency of binge drinking is related to the type of work being done, colleges

might consider offering more payroll positions to students, benefiting both their office staff and students simultaneously. Additionally, given that it is a goal of *Health People 2010*, a document written by the U.S. Department of Health and Human Services, to reduce the frequency of binge drinking, it would behoove the government to increase federal work-study monies allotted to colleges. The positions offered on campuses are, more often than not, in line with educational goals, and certainly understanding of a student's primary obligation to their own academic endeavors. They are not focused on the adult values of high wages, autonomy, or social status (Staff and Uggen 2003).

Finally, given the negative association of all other social bond variables to the frequency of binge drinking, colleges would be remiss not to consciously work to build a trusting relationship with individual students from the beginning of their matriculation. Students can benefit from knowing they have a faculty or staff member with whom they can discuss personal problems, from knowing the rules of the institution, and from general satisfaction with their education and life at school.

### **Limitations**

There are several limitations to this study, and they primarily surround the use of the secondary data source, CAS. While the data compiled for the CAS are fairly comprehensive, they were not designed for this study and the questions are therefore not all ideally framed for the inquiry at hand. Ideally, the research would be tailored to suit the theory being examined. Given that other researchers (Durkin et al. 1999; Igra and Moos 1979) have previously authored

studies and designed measures for variables pertinent to social bond theory, such as belief or attachment in a higher education setting, it is evident that these variables as designed within can be improved upon.

In the worst case scenario, the measures do not assess what they are intended to measure. For example, the first measure of attachment (Attachment 1) is the only social bond variable to be positively associated with an increase in the frequency of binge drinking. This association remained through the zero-order correlations, first level regressions, and interaction models. It is possible the measure was assessing 'satisfaction with school', rather than 'attachment to school', which could account for the measure's positive and significant association with binge drinking. Conducting one's own study with the measures as written by Durkin et al. (1999) and the more comprehensive list of involvements included here could provide an even more thorough report on the effects of involvement on binge drinking.

Regarding the more comprehensive list of involvements included in this study, the CAS provided measures of all excepting Greek membership in terms of hours of participation. While it may be difficult to get at hours of Greek participation where a student may *live* in the involvement, it may be useful in the future to make attempts to parse out the actual level of participation as opposed to this dichotomous view of participation.

A second complication for the Greek life measure pertains to the sector of service fraternities. Where Greek systems are typically viewed as social organizations where service may or may not be a component of membership or

mission, service fraternities and sororities are founded with a primary mission for service and fellowship. Alpha Phi Omega and Gamma Sigma Sigma are examples of national service fraternities where alcohol is not permitted at all and community service is the only approved mission of the group. Future research must find a way to reclassify or identify such fraternities for though they share a label, they do not share a mission, and thus self-identification as a member of a Greek organization may not necessarily be measuring what it presumes to measure.

This same concern is mirrored in certain student organizations that are founded purely for service and volunteering. While the involvements here are comprehensive, the aforementioned messy categorizations complicate studies such as this where a student organization, such as Circle K International, is a group brought together by students' collective mission to provide community service. How the students classify this information in their questionnaire responses as either hours spent volunteering or hours spent in student organizations could alter the outcomes of the study.

A final limitation of the study presented by the use of the secondary data source is inability to measure binge drinking with its most recently adopted method designed by the National Institute on Alcohol Abuse and Alcoholism in 2004 (Cranford et al. 2006). The newer operational definition includes a measure of the duration of time over which the drinking episode occurred and reviews past year behaviors. Cranford et al. (2006) determined this measure offered a better picture in which to understand alcohol consumption behaviors by

college students. However, as the CAS did not include the necessary questions used to measure past year behaviors, the newer measure for binge drinking could not be applied.

Additional limitations presented by this study include questions of causality and concerns about self-reported data. Although relationships can be established between involvements and binge drinking, causality cannot be determined. There is no longitudinal examination to determine when the students began participating in their involvements and when they began binge drinking. Therefore, while high school binge drinking was controlled, it cannot be determined if certain involvements lead to binge drinking or if binge drinkers are drawn to participate in activities that appear to support the behavior.

Finally, there are always concerns about self-reported data, especially as they regard personal deviant behaviors. While the respondents are guaranteed anonymity, the researchers had no personal knowledge of their actual drinking, drug, sexual, or criminal activities. Thus, a student concerned about reporting an illegal behavior such as underage drinking, drinking and driving, or assault may not fully disclose their actual behaviors.

### **Recommendations for Future Research**

Given the many independent variables in this study there are innumerable directions this research could lead. A primary recommendation, however, is to first focus on the dependent variable. Binge drinking has been alternately operationalized as five drinks in a sitting for men and women, five drinks in a sitting for men and four for women, and now a new measure using drinking

duration, quantity, and past year behavior. With this many definitions in concurrent and equally popular usage, the findings in the existing literature are occasionally difficult to reconcile with each other. While there is agreement that in all cases binge drinking has negative consequences, the research will only be enhanced by a common understanding of the term itself. I recommend that future studies examine and identify the best possible working definition for the term.

Upon further consideration of the variable "student organizations", it has become clear that this simply cannot, and does not, suffice as an individual category of student involvement. Much as the literature surrounding high school student organizations has identified the variable as problematic to work with (Marsh 1992), I encountered the same problems in this study. Future studies should consider conducting a similar study which further dissects this category. Such a study would allow the researchers to know if student organizations, in general, support binge drinking, or if there are differences between student organizations in place to serve athletic, academic, volunteer, and social purposes.

Finally, future researchers must continue to study binge drinking within the context of guiding theories. While a few of the studies reviewed grounded the work in theory, most were deemed exploratory. For this reason, much has been established in the way of the existence and problems of binge drinking, but little has been put forth to explain the behavior. It is clear that neither social bond theory nor subcultural theory alone will explain how to prevent this dangerous

behavior, but future researchers must keep seeking the theoretical basis for why it happens before true progress can be made towards reducing the behavior.



## APPENDICES

## APPENDIX A

### SOCIAL BOND THEORY

Travis Hirschi's (1969) social bond theory assumes people will inherently commit deviant acts, unless some force, or more likely *forces*, act against them. The usual question regarding acts of deviance is 'why do people commit deviant acts?' Social bond theory instead answers why nondeviants abstain from committing deviant acts, and one element of the theory is their involvement. The theory assumes that all people, given free reign, would commit deviant acts that offer some reward. Travis Hirschi (1969) formulated the social bond theory arguing that the probability of delinquency is reduced when an individual has strong ties to one or more of the four elements making up a social bond. The four identified elements leading to conformity, and therefore decreased delinquency, include attachment, commitment, belief, and involvement.

Attachment refers to the connection, including affection and respect, an individual has to others. These might include parents, teachers, or employers, but Hirschi does not give an order of importance to people in various roles. Commitment refers to an individual's interest and investment in conformity. This might be to get an education or build a career. Belief refers to the individual's dedication to the value system of the society in which they operate. It acknowledges that many people do not feel a moral obligation to conform. Involvement refers to the amount of time and engagement one spends in

conventional activities. It implies the adage "idle hands are the devil's playground" whereby those with plenty of productive activities do not have time for deviant activities.

These four bond elements are theorized to prevent deviance because, in their ideal whole, they indicate that a person has a stake in conformity. Deviants, lacking an attachment to respected individuals, a commitment to conformity, involvement in the community, or a belief in the value system of the society, have a low stake in the community. The prevention powers of social bond theory lie in the fact that people with a stake in their community do not want to disappoint others, feel the associated guilt, fear getting caught, and desire to maintain their reputations (Little 1995).

## APPENDIX B

### SUBCULTURAL THEORY

Subcultural theory is wrought with issues surrounding its definition, usage, and parameters. Developing over time, subcultural theory is nebulous and lacks the structure and quantifiable appeal of social bond theory. In order to fully understand the theory, it is imperative to first understand the language in use. The term “subculture” is used loosely throughout academic work to define groups as dissimilar as the Amish, Mormons, ethnic groups and gangs (Wolfgang and Ferracuti 1967). These groups are diverse not only by virtue of their intentions, but they are different in their internal structures, means of communication, and formality.

However, each of the aforementioned groups does have its own set of norms, divergent, though derivative, of a larger dominant, parent, or referent culture. Wolfgang and Ferracuti state that a subculture implies there are differential values between and among one culture of people and the larger central value system (1967). In all cases, then, it is imperative that in order to establish the existence of a subculture, one must first establish the existence of the referent culture. In this thesis, the college, including the students, administrators, policies, surrounding community, and norms make up the referent culture. The subculture then is defined by its own norms, particularly as they

deviate from those of the parent culture. As with any culture, a subculture transfers between and among its members customs, rituals, artifacts, and beliefs.

Continuing the discussion of the elements of a subculture, Wolfgang and Ferracuti (1967) note that a subculture does not necessarily require social interaction among members (p. 102). The authors maintain that delinquent gangs may be spread throughout a city and rarely or never have any contact. However, they cannot each be identified as separate subcultures as they indeed share the same customs, values, and beliefs. In contrast, Fine and Kleinman issue internal communication as one of two necessary indicators of a valid subculture (1979). They argue that while gang A and gang B might share the same structure and mission, it is not inherently clear and cannot be presumed that they share the same culture system, beliefs, or rituals that can be passed among all members of that particular subculture. Additionally, Fine and Kleinman (1979) find that if they do share the same culture systems, beliefs, and rituals, there must be some type of communication at work given the impossibility of polygenesis (Brunvand 1968).

The second element of a valid subculture is one whose members identify themselves as a group who share a common identification. Given the examples of subcultures offered by Wolfgang and Ferracuti, it is not believed by this author they would dispute this point. Given that Fine and Kleinman were attempting to build on the subcultural theories of Hollingshead (1939), Cohen (1955), Sykes and Matza (1957; 1961), and Wolfgang and Ferracuti (1967) this thesis accepts

and applies the restrictions set forth by Fine and Kleinman to establish a valid subculture.

Accepting that subcultures have their own norms, they are most often classified by those which deviate from the norms of the referent group. It is perhaps for that reason that more than one coach has lamented at some time, "When he sings in the choir, he's a business major; when he gets caught at a keg party, he's a football player." Recently, Wooden and Blazak examined youth subcultures and noted that the norms developed within them emerge in resistance to the dominant culture and more generally the "banality of suburban life" (2001, p. 20). Haenfler's (2006) study of the "straight edge" youth subculture found that the identity of the youth participating in that subculture was indeed based around resisting the dominant culture, in that example the dominant culture is youths' own peers. Straight edge youth identify themselves as youth who do not drink alcohol, use drugs, engage in promiscuous sex, or eat meat. These youth escape the "banality" of their lives by enjoying a subculture based on punk rock music and concerts. In contrast to the established values of the straight edge youth, and accepting Wooden and Blazak's characterization of youth subcultures (2001), the groups studied here appear to escape the banality of their own lives through excessive alcohol consumption.

## APPENDIX C

### QUESTIONS

A2 – Are you male or female?  
*Male / Female*

A5 – Are you a member of a fraternity or sorority?  
*Yes / No*

A8 – How important is it for you to participate in the following activities at college?  
c. Academic work  
h. Religion  
*Very important / Important / Somewhat important / Not at all important*

B4 – Do you agree with the way your college is dealing with student alcohol use?  
*Agree strongly / Agree / Disagree / Disagree strongly*

B19 – What should be the legal minimum drinking age?  
*Under 18 / 18 / 19 / 20 / 21 or over*

C1 – Think back over the last two weeks. How many times have you had five or more drinks in a row?  
*None/ Once / Twice / 3 to 5 times / 6 to 9 times / 10 or more times*

C13 – In the past 30 days, how often did you drink enough to get drunk? (By drunk we mean unsteady, dizzy, or sick to your stomach.)  
*Not at all / 1 to 2 occasions / 3 to 5 occasions / 6 to 9 occasions / 10 to 19 occasions / 20 to 39 occasions / 40 or more occasions*

F1 – In general, how satisfied are you with the education that you are receiving?  
*Very satisfied / Somewhat satisfied / Somewhat dissatisfied / Very dissatisfied*

F2 - In general, how satisfied are you with your life at school?  
*Very satisfied / Somewhat satisfied / Somewhat dissatisfied / Very dissatisfied*

- F4 – Do you know a member of the faculty or administration with whom you can discuss a personal problem?  
Yes / No
- F6 – In the past 30 days, how many hours per day on average have you spent on each of the following activities?  
b. Studying outside of class  
c. Working for wages  
e. Student organizations  
f. Playing or practicing intercollegiate sports  
h. Volunteer work  
*Average number of hours per day: 0 / 1 / 2 / 3 / 4 / 5 or more*
- G3 – Which of these racial or ethnic groups describes you best?  
*White / Black or African American / Asian or Pacific Islander / Native American Indian or Native Alaskan / Other*
- G11 – During your last year in high school, on how many occasions did you have five or more drinks in a row?  
*Never / 1-2 occasions / 3-5 occasions / 6-9 occasions / 10-19 occasions / 20-39 occasions / 40 or more occasions*
- G17 – How far did your father (or that person who served as your father) go in school?  
*Less than a high school diploma / High school diploma / Some college or technical schooling beyond college / Four year college degree or more / Don't know / Not applicable*
- G18 – How far did your mother (or that person who served as your mother) go in school?  
*Less than a high school diploma / High school diploma / Some college or technical schooling beyond college / Four year college degree or more / Don't know / Not applicable*



## APPENDIX D

### IRB APPROVAL LETTER

#### University of New Hampshire

Research Conduct and Compliance Services, Office of Sponsored Research  
Service Building, 51 College Road, Durham, NH 03824-3585  
Fax: 603-862-3564

15-Mar-2007

Magrath, Lauren  
MA Liberal Studies  
PO Box 133  
Henniker, NH 03242

**IRB #:** 3951

**Study:** The Effect of Involvement on Binge Drinking: An Examination of Competing Social Theories

**Approval Date:** 12-Mar-2007

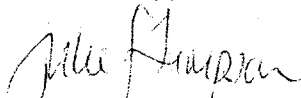
The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study as Exempt as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 101(b). Approval is granted to conduct your study as described in your protocol.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the attached document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. (This document is also available at <http://www.unh.edu/osr/compliance/irb.html>.) Please read this document carefully before commencing your work involving human subjects.

Upon completion of your study, please complete the enclosed pink Exempt Study Final Report form and return it to this office along with a report of your findings.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or [Julie.simpson@unh.edu](mailto:Julie.simpson@unh.edu). Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,

  
Julie F. Simpson  
Manager

cc: File  
VanGundy, Karen

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